wireless RERC

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VIA ECFS

Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
TW-A325
Washington D.C. 20554

Re: *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket No. 03-123

Dear Ms. Dortch:

Enclosed for filing in the above referenced proceeding pursuant to the Commission's June 30, 2004 Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking ("TRS FNPRM"), are the Comments of the Rehabilitation Engineering Research Center on Mobile Wireless Technologies for Persons with Disabilities (Wireless RERC).

Should you have any questions concerning this filing, please do not hesitate to call me.

Respectfully submitted,

Helena Mitchell, Director *in consultation with*
Paul M.A. Baker, Associate Director, Policy Research
Ed Price, Project Director, Emerging Wireless Technologies
Alan Bakowski, Research Assistant,

Rehabilitation Engineering Research Center on Mobile Wireless Technologies for Persons with Disabilities (Wireless RERC)

Dated this 18th day of October, 2004

Enclosure

Before the
Federal Communications Commission
Washington D.C. 20554

Telecommunications Relay Service and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities	)	CC Docket No. 90-571
	)	CC Docket No. 98-67
	)	CG Docket No. 03-123

Comments of
Rehabilitation Engineering Research Center on Mobile
Wireless Technologies for Persons with Disabilities (Wireless RERC)

Introduction

The Rehabilitation Engineering Research Center on Mobile Wireless Technologies for Persons with Disabilities (Wireless RERC)[1] is a research center focusing on promoting universal access to mobile wireless technologies and exploring their innovative applications in addressing the needs of people with disabilities. In accordance with the Federal Communications Commission's (FCC's) June 30, 2004 Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking (TRS FNPRM) the Wireless RERC submits the following comments to CG No. 03-123.

IP Relay over wireless can contribute to increased mobility for people with disabilities[2]

As a proponent of reducing barriers to and increasing the use of mobile wireless devices by people with disabilities, the Wireless RERC recognizes that the IP Relay component of TRS has enormous potential for increasing the ability of people with disabilities to operate more

[1] The Rehabilitation Engineering Research Center on Mobile Wireless Technologies for Persons with Disabilities (Wireless RERC) is funded by the National Institute on Disability and Rehabilitation Research (NIDRR) of the U.S. Department of Education, grant # H133E010804.

[2] This paragraph argues the importance of IP Relay over wireless modalities, and falls under this *FNPRM*.

autonomously in daily life. IP Relay allows people with hearing and speech disabilities to have mobile access to telecommunications using mainstream wireless technology instead of requiring special adapters for TTY equipment. IP Relay is compatible with more devices, cheaper, and easier to use than traditional mobile wireless TTY, and potentially less obtrusive in general usage. The proliferation of text messaging and SMS devices, which supplement voice communication, also expands opportunities for mobile wireless communication between people with disabilities and with the general population.[3] However, only IP Relay bridges text messaging services with the Public Switched Telephone Network (PSTN), and thus at present is the only service that offers the functional equivalence of a telephone call required by the Americans with Disabilities Act of 1990.

While we believe that IP Relay is a very valuable service, we feel that additional considerations with respect to the implementation of IP Relay need to be noted. It is important that IP Relay communication be based on open standards and not rely upon any one specific IM application.[4] Further mode of operation is important, with transmission character by character preferred to a "line by line" mode, as character by character generally is considered to be more natural for voice communications. Although somewhat broader than IP Relay, coverage issues also need to be considered, as not all wireless devices are a) capable of utilizing IP Relay, and b) not all networks and services are able to universally transmit and receive, particularly in rural areas with voice only coverage. An additional possibility would be to encourage wireless manufacturers to build in TTY capability so that the handsets could generate relay calls directly, avoiding the need for a separate TTY, and so 7-1-1 and 9-1-1 calls could readily be made. Thus while we strongly advocate the use of IP Relay it is also critical that 1) coverage areas be generally improved, and 2) functional equivalency requires emergency calls from a wireless

[3] We concur with and strongly support the conclusion in the Introduction (¶ 2 and footnote 15) to FCC 04-137 that TRS in generally benefits a larger population in that it also facilitates the communication between hearing individuals and persons with hearing disabilities; a conclusion which we believe applies to IP Relay.

[4] Such as AIM (an AOL product).

phone be treated in the same manner regardless of whether the call goes to the PSAP through a TRS facility via 711 or directly via 911[5], and 3) that any solution allow for backward compatibility until applications become mode agnostic.

Registration for IP Relay may impose burdens for mobile wireless users (¶ 226)

Several commenters in the previous round of this proceeding[6] noted potential problems with the IP Relay registration scheme outlined in ¶ 226. Telecommunications for the Deaf, Inc. (TDI) commented that a registration system may "cause delays in call initiation that consumers will likely find annoying and undesirable."[7] The Wireless RERC notes that any such delays on wireless devices may make the service impractical and impose increased burdens on users. Additional access time devoted to registration or logging into a profile may create unnecessary expenses for the IP Relay user (who may be paying per minute or per bit of information transferred) and will contribute to the depletion of battery power. Any increase in the set-up time of an IP Relay call will have an especially detrimental effect on mobile wireless users, who depend on flexibility, and may be especially sensitive to the increased cost associated with an IP Relay call.

Additionally, devices currently enabled for IP Relay may be incapable of completing the registration process. Some IP Relay services use existing systems bridging wireless devices to instant messaging systems[8], and in many cases wireless devices using these types of systems may not be able to even display a registration screen, let alone allow a user to complete it.

Registration would also be ineffective for mobile wireless users because their calling location easily changes. The recommendation in ¶ 226 does not sufficiently address how mobile wireless users would identify their location. Using current technologies, any mechanism would

[5] See Reply Comments of Wireless RERC 10/09/03 and also FCC 04-137 @ ¶ 53 and footnote 186.

[6] *Second Further Notice of Proposed Rulemaking*, CC Docket 98-67.

[7] See FCC 04-137 footnote 649, TDI Comments at 11.

[8] see for example, www.ip-relay.com

be impossible to audit for validity, as a consumer could enter any location and the system would have no way to confirm. Previous commenters have also noted the potential incentives for IP Relay users to give false or incorrect information about their location.

IP Relay as a mandatory form of TRS (¶ 232)

We agree with the Commission that the provision of IP Relay has matured and is sufficiently widespread so as to not pose new burdens on IP Relay providers or state TRS programs.[9] We also concur with the Commission's concern that there is a risk some states may elect not to offer IP Relay service if it is not mandatory.[10] We believe this risk poses a major barrier to the expansion of mobile wireless communications for people with disabilities. Should some states choose not to offer IP Relay services, people with disabilities in those states would be unable access IP Relay through traditional TRS.[11] This would create a serious disincentive for people in those states to invest in relay-capable wireless devices. Furthermore, if IP Relay services are only offered in a patchwork of states, people across the country who intend to access IP Relay from their wireless handhelds may find themselves without service as they travel throughout the nation. This uneven deployment of IP Relay would diminish the attractiveness of mobile wireless devices for people with disabilities nationwide.

Innovative mobile wireless applications can promote quality of life and independence for people with disabilities. Without requiring IP Relay to be a mandatory form of TRS service, people with disabilities will be inhibited in their ability to communicate. Further, implementation of universal IP Relay would help increase the number of all people who now use or can benefit from mobile wireless technologies.

[9] ¶ 231.

[10] *Ibid.*

[11] We note it may be possible for providers to offer IP Relay service to customers willing to fully pay for the service, but this would be a market transaction outside the scope of TRS.

Offering IP Relay 24/7 (¶ 232)

There are at least two compelling reasons why IP Relay services should be offered on 24 hours per day, 7 days per week basis. First, providing less than 24/7 IP Relay service will decrease the attractiveness of wireless Internet-ready devices for individuals with hearing and speech disabilities. A hearing- or speech-impaired customer unable to access IP Relay every time it is needed, could be faced with the option of either using mobile TTY or having no accessible wireless communication at all. While some TRS users may feel more comfortable using mobile TTY than IP Relay on a wireless handheld, many users prefer IP Relay for its added convenience, efficiency, and ease of use.[12] We also note that IP Relay services can be provided at lower costs than TTY, providing a benefit to the public at large. It is unlikely, however, that customers who prefer IP Relay would be willing to purchase a compatible wireless handheld if they would also need a mobile TTY in order to ensure full access to communications. Without a 24/7 rule to encourage the use of IP Relay, the Commission would be adopting a policy that favors mobile TTY. We do not believe the Commission's TRS policies should favor older technology if in the process, it serves as a disincentive to the adoption of newer, more robust technology.

Second, customers depend on their mobile telecommunications devices to assist them in the event of an emergency. If IP Relay is not offered 24/7, individuals with disabilities who depend on mobile IP Relay may not have the ability to communicate during an emergency, which might occur at any time. The Commission has an obligation to promote access to emergency communications for all people, and requiring less than 24/7 provision of IP Relay could diminish the safety of people with disabilities.

[12] These factors have been cited by the Commission on numerous occasions. *See FCC Consumer Facts: IP Relay Service* [http://www.fcc.gov/cgb/consumerfacts/iprelay.html], *Statement of Commissioner Kathleen Abernathy* [http://ftp.fcc.gov/cgb/news/trs_abernathy.html], *Statement of Commissioner Michael J. Copps* [http://ftp.fcc.gov/cgb/news/trs_copps.html].

While we realize the current policy of the FCC encourages users to contact 911 directly via TTY, the Wireless RERC feels that people with disabilities will increasingly use other means to contact emergency services as TTY use decreases, and thus support for alternate means for emergency contact should be encouraged.

Respectfully submitted,

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